State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-24-3
Relating to Exemptions under Section 27156
of the Vehicle Code

LIFT, INC.
"LIFT FUEL EFFICIENCY SYSTEM"

Pursuant to authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39023 of the Health and Safety Code;

IT IS ORDERED AND RESOLVED: That the installation of "Lift Fuel Efficiency System" distributed by Lift, Inc. of 7819 Santa Monica Blvd., Los Angeles, California 90046, has been found to not reduce the effectiveness of required motor vehicle pollution control devices and, therefore is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1975 model-year and older model-year vehicles.

This device consists of a plastic bottle, rubber hose, plastic tee for connection into the PCV system, mounting brackets, and bottle cap with a vapor outlet port incorporating a 0.022 inch orifice diameter (Identified by Part No. B-1) and air inlet port. The composition of the fluid is identified by Kem Krest Fluid Specification No. 1072.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different than those listed by the vehicle manufacturer.

Changes made to the design, operating conditions of the device or composition of the fluid as originally submitted to the Air Resources Board for evaluation that adversely affect the performance of the vehicle's pollution control devices shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE "LIFT FUEL EFFICIENCY SYSTEM" DEVICE.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes unlawful, untrue or misleading advertising, and Section 17534 makes violation punishable as a misdemeanor.

Sections 39130 and 39184 of the Health and Safety Code provide as follows:

> "39130. No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for certification of a device, represent, any device as a motor vehicle pollution control device unless that device has been certified by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this section is a misdemeanor."
>
> "39184. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for accreditation of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been accredited by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as an accredited device which, in fact, is not an accredited device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executive Order D-24-2 dated July 12, 1974 is hereby rescinded.

Executed at Sacramento, California, this 31 day of January, 1975.

WILLIAM SIMMONS
Executive Officer

State of California

AIR RESOURCES BOARD

Staff Report

December 30, 1974

Evaluation of the Lift, Inc. "Lift Fuel Efficiency System" Vapor Injector for Compliance with the Requirements of Section 27156 of the California Motor Vehicle Code

I. Introduction

Lift, Inc. of 7819 Santa Monica Boulevard, Los Angeles, California 90046 has submitted an application requesting an exemption from Vehicle Code Section 27156 (Reference - Exhibit A - Application) for the "Lift Fuel Efficiency System". This Section of the Vehicle Code prohibits the installation of any device or mechanism which would adversely affect the performance of the emission control system. The applicant is requesting to extend their exemption to include the 1975 model year vehicles.

Lift, Inc, was granted an exemption to Vehicle Code Section 27156 by Executive Order D-23-2 dated July 12, 1974. The staff has previously evaluated this device and found it to have no adverse effect on 1974 and older model-year vehicles (Reference - Exhibit C and Exhibit D - January 22, 1974 and July 3, 1974 Staff Reports).

II. System Description

The "Lift Fuel Efficiency System" is a vapor injector device where the vapor enters the engine through the PCV system (Reference - Exhibit B - Installation Instructions). The device consists of a plastic tee, plastic bottle, rubber hose, mounting brackets, and bottle cap containing an 0.022 inch restriction orifice. For a

description concerning the operation of this device, refer to the staff report dated January 22, 1974 (Reference - Exhibit C).

The fluid is a proprietary blend of alcohol and water solution. This fluid is manufactured by Kem Krest Product Company, 24684 Hathaway, Farmington, Michigan 48024. The composition of this fluid is identified by Kem Krest Specification Number 1072 and is on file with the Air Resources Board. The applicant has requested the fluid composition be treated as confidential information.

III. System Evaluation

The staff has determined from previous evaluations of vapor injector type devices on pre-1975 model-year vehicles that an increase in exhaust emissions will not occur if the vapor bleed rate is limited to 0.10 cubic feet per minute (cfm). The vapor bleed rate of the "Lift Fuel Efficiency System" is limited to 0.10 cfm by using a 0.022 inch orifice diameter. The staff believes the 0.10 cfm vapor bleed rate would not increase exhaust emissions on the 1975 model-year vehicles.

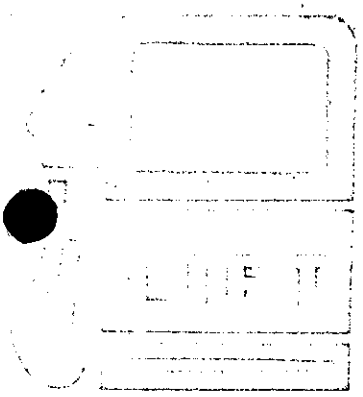
However, the catalytic converter system used on some of the 1975 model-year vehicles can be degraded by certain chemical compounds. Based on the information submitted by the applicant concerning the fluid composition, the staff investigated the effects of these chemicals on catalytic converters. From this investigation, the staff ocncludes the Kem Krest fluid does not contain any chemical compounds which will reduce the effectiveness of the catalyst.

IV. Conclusion and Recommendation

The staff believes the "Lift Fuel Efficiency System" would not have an adverse effect on the emission control system provided that the flow rate is limited to 0.10 cfm and the fluid is identical to those submitted to the staff. The staff recommends that Lift, Inc. be granted an exemption to Section 27156 for the "Lift Fuel Efficiency System" on 1975 and older-model vehicles.

Exhibit A - Application

LIFT, INC.



T.M.

7819 SANTA MONICA BOULEVARD
LOS ANGELES, CALIFORNIA 90046
P.O. BOX 5445
BEVERLY HILLS, CALIF. 90210
Telephone (213) 656-2767

September 19, 1974

William Simmons, Executive Officer
Air Resources Board, State of California
1709 11th Street
Sacramento, California 95814

Dear Mr. Simmons:

Enclosed please find our application for exemption under Section 27156 of the Vehicle Code of the State of California, for vehicles of model year 1975, for your approval.

As you know, the 1975 model cars are now being sold and your approval on our application for exemption is now being respectfully requested.

Looking forward to an early reply, I remain.

Cordially,

LIFT, INC.

William Hariton
President

WH/zd

cc: Richard Kenny
James Mikacich

TO: William Simmons, Executive Officer
Air Resources Board, State of California
1709 11th Street
Sacramento, California 95814

Re: APPLICATION FOR EXEMPTION UNDER SECTION 27156 OF THE VEHICLE CODE OF THE STATE OF CALIFORNIA, FOR VEHICLES OF MODEL YEAR 1975.

We, WILLIAM HARITON, individually and as President of LIFT, INC., A California Corporation, and LIFT, INC., A California Corporation, do hereby, apply, request, and make application for exemption from the prohibitions of Vehicle Code Section 27156 for the device commonly known as LIFT FUEL EFFICENCY SYSTEM, an intake manifold vapor bleed. It is hereby acknowledged that the Air Resources Board has previously issued EXECUTIVE ORDER NO. D-24 on January 28, 1974, Executive Order No. D-24-1 on May 17, 1974, and Executive Order No. D-24-2 on July 12, 1974; all of these executive orders relating to the devise commonly known as LIFT FUEL EFFICENCY SYSTEM.

Executive Order No. D-24-2 of July 12, 1974 granted the exemption from the prohibitions of Section 27156 of the Vehicle Code for 1974 Model Year Vehicles and older. The purpose of this request and application is to continue this exemption for 1975 Model Year Vehicles and older.

LIFT, INC., A California Corporation, has established its home office at 7819 Santa Monica Blvd, Los Angeles, California 90046. Phone Number 213-656-2767. It is proceeding with its marketing and distribution of the LIFT FUEL EFFICENCY SYSTEM throughout the State of California in conformity to and subject to all the rules, laws, regulations of the State of California and suject to direct control of the policies and programs of the Air Resources Board of the State of California. There are presently no actions pending by any governmental agency, either federal, state or county against LIFT, INC. All the requirements and mandates of the prior executive orders have been and

are being abided by and conformed to.

The basic discription of the product still remains the same. LIFT FUEL EFFICENCY SYSTEM is a compact unit which can be installed inside the engine compartment of any car or truck. The LIFT FUEL EFFICIENCY SYSTEM is a vopor induction system. It has a .022 open/shut valve. This set orfice controls the turbulation of the LIFT fuel and therefore, the vapor induced into the air-gasoline mixture for each combustion. The LIFT open/shut valve does not require adjusting.

Basically, LIFT FUEL EFFICIENCY SYSTEM is composed of a Plastic Fuel Reservoir or container; Control Valve, Hose and Connecting device, which attaches to your carburetor's Pollution Control Valve (PVC).

Within the reservoir is a proprietary blend of chemicals that vaporize from a balanced formula. This vapor is drawn off the air space at the top of the reservoir. It then leads into the carburetor to blend with the gasoline's air mixture before it goes into the cylinders. This catalytic action extends the burning time of gasoline, giving you increased combustion efficiency.

This application, in fact a re-application, is respectively submitted for immediate consideration.

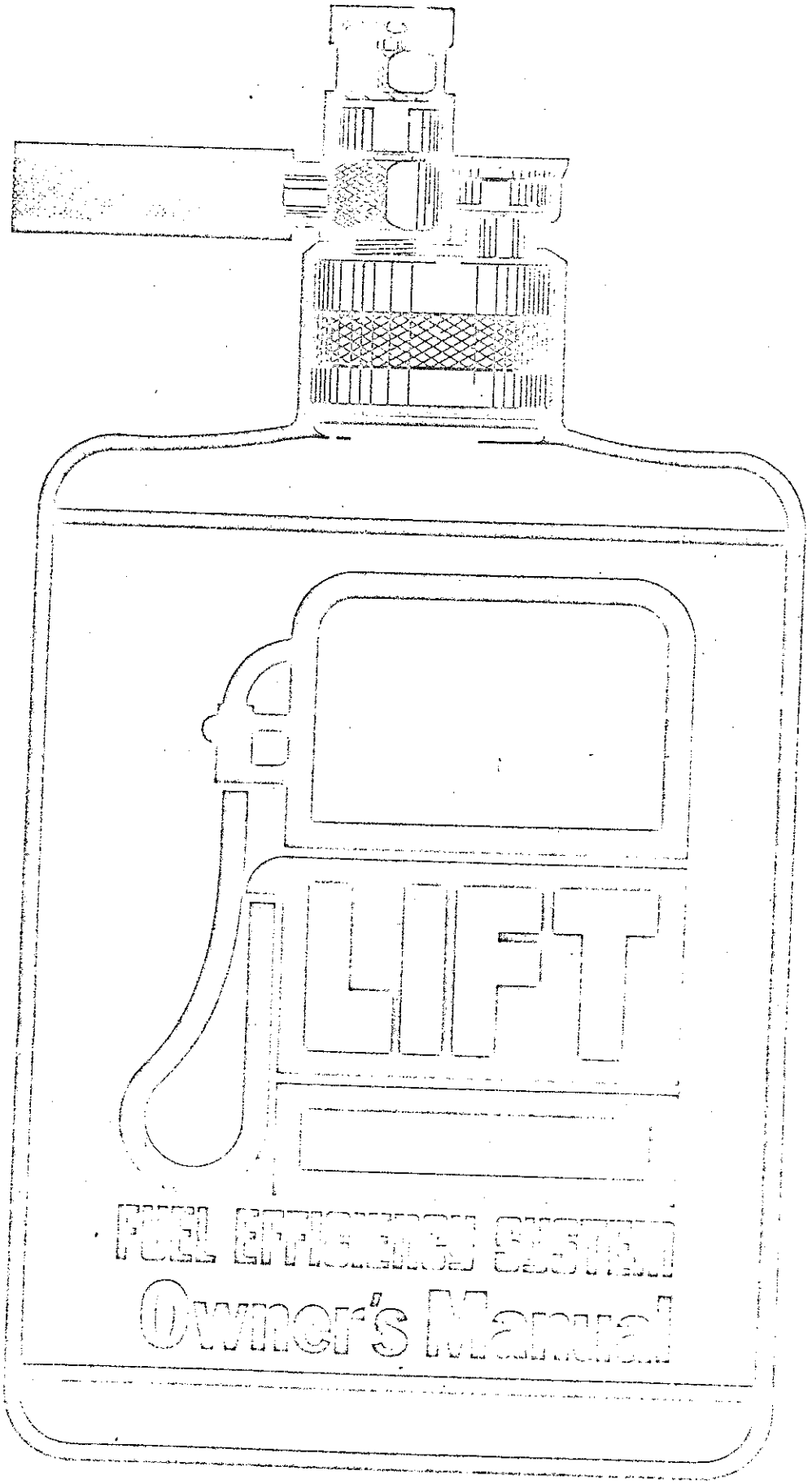
Dated: September 19, 1974

Respectively submitted,

William Hariton

WILLIAM HARITON, Individually
and as President of LIFT, INC.,
A California Corporation

Exhibit D
Installation Instruction



1

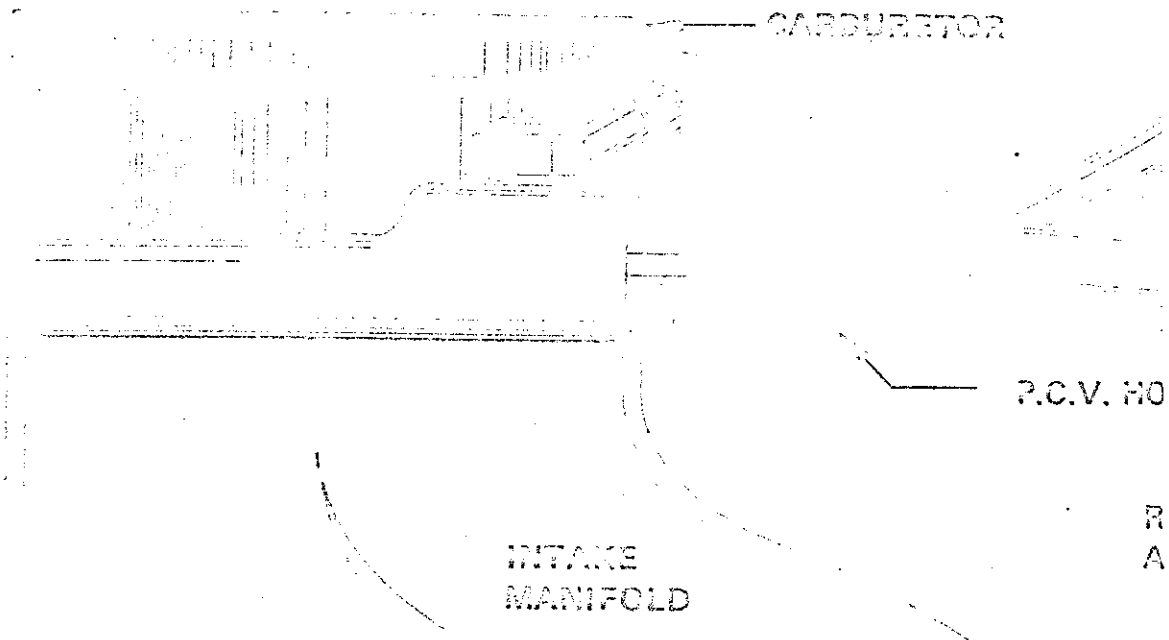
Mount Bracket. Find a convenient place under your car hood large enough to accommodate the LIFT unit. Drill two holes through two of the mounting holes in bracket and attach bracket firmly to side wall of engine compartment with two sheet-metal screws provided.

2

Install Cut-Washer. Remove shipping cap from LIFT Reservoir. Roll cut-washer (in plastic bag) down over base of bottle threads until it sits firmly at base of threads.

3

Insert Control Valve. Insert control valve on LIFT Unit. Make sure it seats firmly against cut-washer to eliminate any vacuum leaks. Now insert LIFT Fuel Reservoir into mounting bracket.



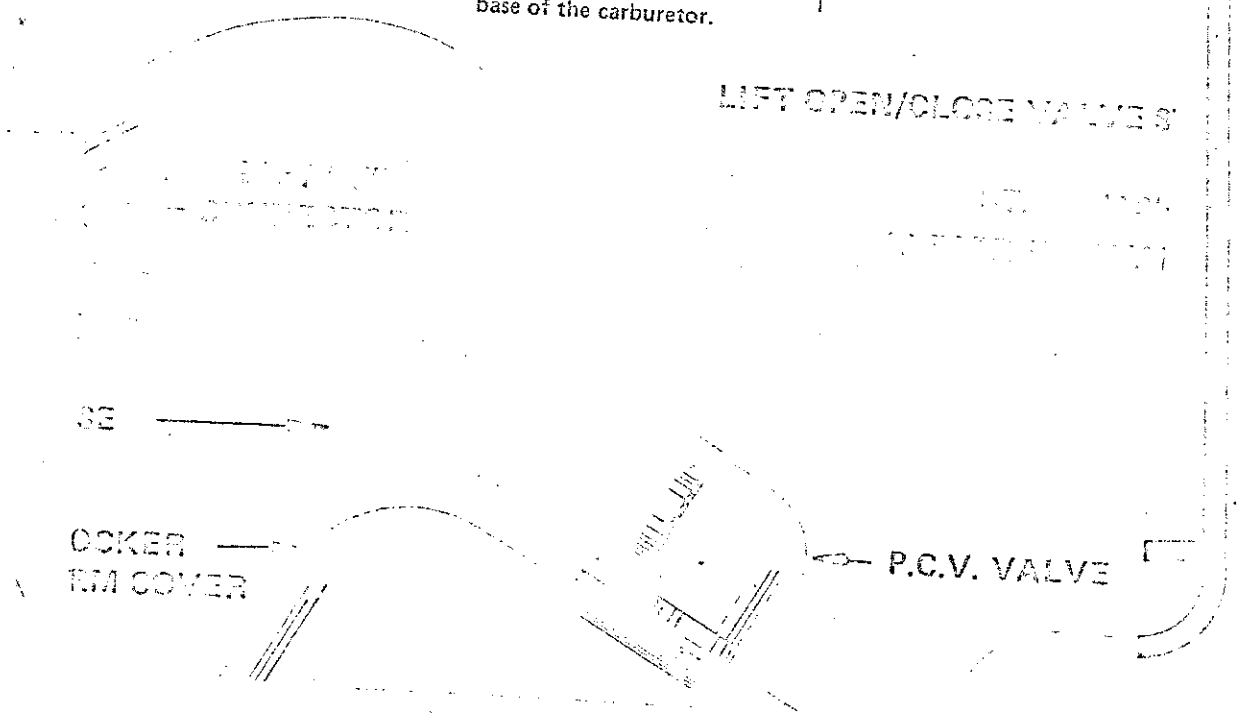
Connect hose to LIFT unit. Attach Unit's hose to LIFT control valve. Be sure it fits snugly on nozzle at top. Check for air leaks.

CAUTION: Make certain LIFT connecting hose does not touch air conditioning hoses or hot manifolds.

Locate pollution control valve. Locate PCV Hose running from the valve lifter cover directly to base of carburetor. (In some cars, PCV Hose is located in manifold on top of block; near oil fill cover; beside crank case; or on top-rear of valley cover.) NOTE: For proper PCV identification — check PCV Hose where it enters engine. Hose should pull out easily. Be certain to re-insert PCV Hose before continuing installation.
In some cases, you may have to connect to another primary vacuum source running to the base of the carburetor.

Insert Connecting "Y". Trace PCV Hose to point where it enters carburetor. With sharp knife, cut PCV Hose as close to the base of the carburetor, as possible. (4" or less for best results.) Into cut, insert appropriate "Y" fitting. NOTE: Three "Y" fitting sizes are provided. Insert so leg "Y" points toward carburetor. Be sure both sides of PCV hose fit securely against "Y".

CAUTION: Never cut or install unit in brake line hose or gasoline line!



7

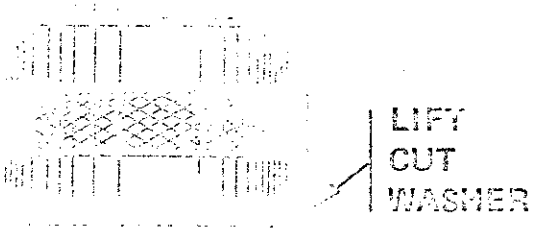
Attach LIFT hose. Take hose running from LIFT Fuel Control Valve and attach it tightly to branch of "Y" fitting you installed in PCV Hose. This completes LIFT hook-up installation

SPECIAL NOTE: Do not install the LIFT "Y" connector into the primary vacuum line to which the charcoal canister line is connected.

8

Start your engine. THEN CHECK ALL CONNECTIONS FOR VACUUM LEAKS. LIFT has a factory pre-set valve, so no adjustment is necessary.

SPECIAL NOTE: If for any reason the valve should be out of adjustment, to properly readjust: close valve, then turn counterclockwise one half turns, then hand tighten lock nut.



FUEL CONTENT

Inside the plastic bottle is a proprietary fluid, specification No. 1072, consisting of water, alcohols, ketones, aromatic hydrocarbons, and other organic compounds.

The control valve which admits vapor to the intake manifold is mounted on the cap of the bottle. This valve has only two positions – fully open or fully closed. It has an orifice diameter of .022 inches. The system contains a standpipe which provides venting to the atmosphere. The same model is used for applications to all vehicles.

SYSTEM FUNCTION

As the engine vacuum increases, bubbles are formed at the end of the standpipe due to the venting action. The rising vapor bubbles violently agitate the fluid and tend to increase vaporization. This vaporous-fluid mixture enters the engine through the PCV system, or any primary vacuum source to base of carburetor.

SYSTEM EVALUATION

St. Clair Sales and Distribution, Inc., has submitted emission results of CVS tests performed by Scott Research Laboratory. The data submitted generally show no adverse effect on emissions with this device when compared with the baseline date. Based on the information presented and operating characteristics of the system, no incompatibility exists with the accredited oxides of nitrogen retrofit devices.

WARRANTY

At any time, up to 60 days from date of purchase, you may return the LIFT Unit and receive a full refund, of the purchase price, less installation, FROM THE POINT OF PURCHASE.

LIFT Fuel Efficiency System is guaranteed by St. Clair Sales & Distribution, Inc. against any defect in workmanship or materials for a period of one year. Liabilities are limited to replacement of defective parts only. See your dealer for repairs or replacement. Enclosed warranty card must be returned to validate above warranty and guarantee.

IMPORTANT TIPS

1. Check all LIFT connections to insure against any vacuum leaks.
2. For best results, have your engine properly tuned after LIFT installation. LIFT will not correct pre-existing engine malfunctions.
3. Be certain to allow time (1,200 to 1,500 miles) for the LIFT System to cleanse your engine before achieving its maximum efficiency. In most cases you can use a lower octane gasoline with a LIFT System!
4. Compare your mileage improvement by keeping an accurate record on the enclosed warranty card. We would appreciate your comments.

LIFT REFILLS

When LIFT fuel mixture is within 1 or 2 inches from the bottom of the reservoir, carefully replace oil mixture with fresh LIFT Fuel. Old fuel mixture should not be mixed with the new fuel.

You should get approximately 2,500 to 4,000 miles per 60-ozs. of LIFT Fuel, depending on engine cubic-inch displacement.

DISTRIBUTED BY:

LIFT FUEL EFFICIENCY SYSTEM
"A VAPOR INJECTOR"
7819 SANTA MONICA BLVD.
HOLLYWOOD, CALIF. 90046
213-656-2767

ST. CLAIR SALES AND DIST., INC.
40935 Production Drive - Mt. Clemens, Michigan 48043

State of California

AIR RESOURCES BOARD

January 22, 1974

Staff Report

Evaluation of St. Clair Sales & Distribution, Inc. "Lift Fuel Efficiency System" (Vapor Injector) for Exemption from the Prohibitons of Section 27156 of the Motor Vehicle Code

I. Introduction

St. Clair Sales & Distribution, Inc. of Mt. Clemens, Michigan, has applied for exemption from the prohibitions of Section 27156 of the Motor Vehicle Code for its "Lift Fuel Efficiency System". This section prohibits the installation of any device which reduces the effectiveness of the motor vehicle emission control system. The applicant is requesting an exemption for 1966-1974 model-year vehicles.

Based on statements received from St. Clair Sales, they have exclusive manufacturing and marketing rights to the system described herein.

Except for the control valve and fluid, the "Lift Fuel Efficiency System" is the same in all respects as the "Turbo Vapor Injector" which was granted an exemption from the prohibitions of Section 27156 by Executive Order D-2, dated April 17, 1973 for 1970 and older vehicles.

II. System Description

This device consist of a vapor injection system and proprietary fluid which is admitted into the PCV line. A plastic bottle is mounted in the engine compartment with a rubber hose providing the connection between the intake manifold and the device.

Inside the plastic bottle is a proprietary fluid, specification No. 1072, consisting of water, alcohols, ketones, aromatic hydrocarbons, and other organic compounds. The applicant claims this formulation will enhance engine performance and increase fuel economy.

The control valve which admits vapor to the intake manifold is mounted on the cap of the bottle. This valve has only two positions - fully open or fully closed. It has an orifice diameter of .022 inches. The system contains a standpipe which provides venting to the atmosphere. The same model is used for applications to all vehicles.

III. System Function

As the engine vacuum increases, bubbles are formed at the end of the standpipe due to the venting action. The rising vapor bubbles violently agitate the fluid and tend to increase vaporization. This vaporous-fluid mixture enters the engine through the PCV system.

IV. System Evaluation

St. Clair Sales and Distributors, Inc. has submitted emission results of CVS tests performed by Scott Research Laboratory. The data submitted generally show no adverse effect on emissions with this device when compared with the baseline data. Based on the information presented and operating characteristics of the system, no incompatibility exists with the accredited oxides of nitrogen retrofit devices.

Confirmatory testing was performed by the Air Resources Board Laboratory. The device was tested on a 1973 Plymouth/Satellite (360 CID) and 1974 Pontiac/Ventura (250 CID). Steady state tests were performed on the Pontiac and Plymouth and a hot CVS was also conducted on the Plymouth.

The steady state emission results of the Pontiac were generally lower than the baseline configuration. Steady state tests on the Plymouth also showed no significant change in emissions.

The CVS test on the 1973 Plymouth showed a decrease in carbon monoxide and essentially no change in hydrocarbons and oxides of nitrogen emissions. The results of this test are listed below.

1973 Federal Cycle Hot Start
Mass Emissions (Grams/Miles)

	HC	CO	NOx
Baseline	0.76	11.13	2.55
Lift-System	0.78	6.21	2.67

These results were typical of the data submitted by the applicant.

V. Conclusion and Recommendation

The staff is of the opinion that the "Lift Fuel Efficiency System" would not have any adverse effect on the existing pollution control system.

Therefore, the staff recommends that the "Lift Fuel Efficiency System" be granted an exemption from the prohibitions of Section 27156 of the Vehicle Code for 1974 and older vehicles.

Exhibit D

State of California

AIR RESOURCES BOARD

July 3, 1974

Staff Report

Addendum to the January 22, 1974 Staff Report
"Evaluation of St. Clair Sales & Distribution Inc.
'Lift Fuel Efficiency System' (Vapor Injector) for
Exemptions from the Prohibitions of Section 27156 of
the Motor Vehicle Code"

I. Introduction

The Air Resources Board Laboratory has conducted further emission testing with the "Lift Fuel Efficiency System" to confirm previous test results. This vapor injector is manufactured by St. Clair Sales & Distribution and utilizes a proprietary fluid manufactured by Kem Crest Products Company of Farmington, Michigan. The additional tests were performed at the requests of the Sacramento District Attorney and Staff Counsel to investigate the effectiveness of the "Lift" device.

St. Clair Sales & Distribution original application to the Air Resources Board for an exemption to Vehicle Code Section 27156 was dated November 28, 1973. An evaluation of the device showed that it would not have any adverse effect on emissions, and consequently, the Staff recommended in a staff report dated January 22, 1974, that an exemption be granted. Executive Order D-24 was issued on January 24, 1974 granting the exemption to Section 27156 of the Vehicle Code.

"Lift Fuel Efficiency System" July 3, 1974

On May 17, 1974, Executive Order D-24-1 was issued revoking Executive Order D-24. The violation of the conditions of the Executive Order led to the revocation.

II. System Description

The "Lift Fuel Efficiency System" procurred commercially was found to be basically the same device evaluated by the ARB staff previously. The orifice diameter of the control valve is 0.22 inches which is identical to the device previously evaluated. The device was received with the proprietory fluid.

Maximum air flow capacities of the present and original tested device are 0.060CFM and 0.080 CFM respectively. (See Figure 1 and Figure 2). The difference is within manufacturing tolerances.

III. Emission Test Program

The test program consisted of three pairs of back to back hot CVS-1 tests comparing the emissions with and without the device. The three pair tests have been determined by the staff as being sufficient to determine whether the device would have a significant effect on the emission control system.

The vehicle selected had the following specifications:

Make and Model Year:	1973 Ford Pinto
Engine	2000 cc

"Lift Fuel Efficiency System" July 3, 1974

Carburetor	Weber - 2 barrel
Transmission	Automatic
Emission Control System	Engine Modification

After the vehicle was received by the ARB staff, the vehicle was pre-checked to assure all carburetor and ignition settings were adjusted to OEM. At the end of each test, the settings were checked and adjusted.

IV. Emission Results and Evaluation

The following tables summarizes the emission testing results of this program.

Date	Vehicle Configuration	Exhaust Emissions gm/mi HC	CO	NOx	CO_2	Fuel Consumption mpg
6/6/74	Baseline	1.28	14.25	2.41	400.83	20.78
6/6/74	Lift	1.41	14.34	2.59	393.80	21.10
6/6/74	Baseline	1.31	12.87	2.62	406.16	20.62
6/6/74	Lift	1.30	13.18	2.65	405.16	20.64
6/6/74	Baseline	1.35	13.98	2.79	387.91	21.44
6/6/74	Lift	1.30	13.96	2.55	383.14	21.70
	Average Baseline	1.31	13.70	2.61	398.30	20.95
	Average "Lift"	1.34	13.82	2.60	394.03	21.15

Exhibit D (Cont.)

Figure 2

Flow of "Lift" Device Evaluation
Previous Staff Report